

## Video Transcript: TB Diagnosis with Dr. Safdar

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Hello everyone. My name is Hafsa Safdar and I'm a pulmonary and critical care fellow

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at the University of Alabama at Birmingham. Today I will be talking about the diagnosis

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of tuberculosis. Let's begin by talking about who should get tested for TB. You should talk

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to your doctor or talk to the Alabama Department of Public Health if you have been in close contact

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with someone who has TB, have a history of HIV/AIDS, and a weakened immune system.

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You were born in or lived in a country where TB is a common disease and have symptoms of

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cough greater than 3 weeks, fever, night sweats and unintentional weight loss. Testing is also

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recommended for people who are at high risk of developing TB. for example, healthcare workers,

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uh, nursing home residents, correctional facility staff and residents, hospital employees, unhoused

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individuals and people living in crowded living situations and people with diabetes or those who

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use IV drugs. The diagnosis of TB is multifold. Firstly, you can get imaging of the chest by

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getting an X-ray. You can get some blood samples and look for the presence of uh tuberculosis in

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that way. or you can also take mucus samples and

look at them under the microscope or try to grow

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them out on a culture. Um, what I want you to remember from this is that the culture can take

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four to six weeks to give us an answer on whether or not the patient has tuberculosis. Let's start

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by talking about TB skin testing. Basically, a small amount of fluid that has sterilized protein

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from the bacteria in it is injected under the skin of your forearm. it doesn't hurt much and

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you go home after the injection is done. 48 to 72 hours later you will come back to the

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uh health department and the nurse will measure a bump if it develops um at the site where the

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injection was done. The size of the bump depending on your risk factors tells us whether or not the

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test is positive or not and then we will talk about what happens from the positive test. The

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like I said the test doesn't hurt much and it is completely free at the county health department.

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I have left the information on what the different sizes mean here for your reference. Alternatively,

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we have the option of getting TB blood testing. A simple blood draw is done and the blood from

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the patient is mixed with TB proteins and if this patient has been exposed to tuberculosis,

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the blood cells will have a reaction to the TB proteins and we'll be able to measure this

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reaction. The results come out in 1 to two days and we're accordingly able to process um the

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results. If it's positive, it's likely to be a TB infection. If it's negative, TB is to be unlikely

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and unclear. We'll talk about what we do then. Um this test is particularly useful in people

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who've had the BCG vaccine which is quite common in um many countries uh around the world. So now

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putting the information together if a person has tuberculosis risk factors or the symptoms that we

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talked about we choose a test whether the skin test or the blood test and then we process the

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results. If the results are positive then it's likely to be TB and we proceed with the chest

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X-ray and sputum cultures or the mucus. Um if it's unclear we switch the test around

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or can also proceed with imaging as well as getting the mucus sample. But if it is negative

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then it is unlikely to be TB and it helps us rule out the TB infection. So now the blood test or

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the skin test is positive. What happens next? So firstly we get a chest X-ray. This is to look for

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signs of TB on the lungs. Secondly we also look at mucus samples. We need three consecutive mucus

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samples taken on three consecutive mornings. And the lab basically looks at the sputum for

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bacteria. Uh like I said the cultures take four

to six weeks to finalize and gives us the final

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answer of whether or not TB is on there and then we can also see what medicines will work best for

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that particular bacteria. Now putting all of the information together if you have a positive test

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but a normal chest X-ray then this points towards latent TB which is silent TB infection without

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active disease. Now if the chest X-ray is abnormal then we call it active TB and immediately the

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patient starts on treatment. Throughout this whole process the Alabama Department of Public Health is

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tracking the patients who have positive results and providing guidance on how to manage them.

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To summarize, TB is tested with a skin test or a blood test. Both of them are accurate. A positive

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test doesn't necessarily mean you have TB. It's the first step in our diagnostic algorithm.

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Once we get a positive test, we go ahead with the chest X-ray, mucus sampling, diagnose, and then go

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ahead with treatment with the Alabama Department of Public Health. Nobody needs insurance for TB to

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be diagnosed or managed. This is free. Uh there's free treatment and diagnosis available at all 67

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Alabama County Health Departments. And all of this is confidential with a confidential helpline that

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you can call at any time for support. And latent TB can be treated to reduce your risk of

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developing active TB. These are my references. And finally, I want you to want to leave everyone with

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the message that everyone who has any concerns for TB should get tested free confidential as soon as

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possible. And I've left the information for the TB hotline on um this uh site. Thank you so much for

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listening. Um, I'm looking forward to seeing what everybody else has to say about TB. Thank you.